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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/935,695

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Tooru Ooiwa

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57325-US-SuS/nh

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EXAMINER

SCHEUERMANN, DAVID W

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,695

Applicant(s)

OOIWA, TOORU

Examiner

David W. Scheuermann

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 and 12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The line of demarcation separating the "regular segment" from the "irregular segment" is not clear.

The specification describes "irregular segments" 236, 234 and 235 on page 9 in reference to figure 11. Do "irregular segments" include the portion housed within the body of stator core 22? Do "irregular segments" include the portion extending through core 22 to the opposite axial side of stator core 22? Do "irregular segments" lie on both axial sides of core 22? Where is the junction or point at which the "regular segment" is electrically connected to the "irregular segments"?

Do "regular segments" include the portion housed within the body of stator core 22? Do "regular segments" extend through stator core 22 to the opposite axial side of stator core 22? Do "regular segments" lie on both axial sides of core 22?

Additionally, it is not clear at which point during the construction the insulation is applied. Is insulation applied to both segment types before insertion into the core? Would the second insulation be applied by painting the portions of the "irregular segments" which extend outside the core? If the "irregular segments" are insulated how is the electrical connection formed at the neutral point?

Because the specification does not, in such full, clear, concise, and exact terms define the invention and differentiate which portions of the stator winding constitute "regular segments" and which constitute "irregular segments" a person skilled in the art would not be able to build the invention as envisioned by the applicant.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The meets and bounds of the terms "regular segments" and "irregular segments" are not clear. It is not clear where a "regular segments" ends and an "irregular segments" begins. Additionally, it is not clear whether there is a difference between "the third coil end portions" (claim 3) and "the forth coil

end portions" (claim 4) as the specification on page 10, lines 19-24; and page 8, lines 23-26, respectively, seem to refer to the same structure.

Claims 6 is unclear as a "the fourth coil end portion," emphasis added, imply an unclaimed "third coil end portion."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 11, and 12, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Schmidt et al., US 5712517. Schmidt et al. shows a rotary electric machine having a rotor (inherent), stator see figure 1 and 2, having an irregular segment (the segment having stator lead wire 36' extending therefrom which also includes the winding which extends axially around both ends of the stator) around which insulator sleeve 80 is attached, and a plurality of regular segments as shown in figure 1 consisting of those segments which do not have stator leads extending therefrom to terminal plate 50. It is inherent that all the segments are insulated. Insulation sleeve 80 forms a second insulating layer.

Re claim 2, as best understood, since the regular segments are not shown connected to terminal plate 50 it is inherent that they are connected in a different manner.

As to claims 4, 6 and 7, as best understood, it is noted that both the regular segments and irregular segment of Schmidt et al. have similar end coil shapes and stator lead wire 36' extends beyond these end coil groups.

Re claim 5, as best understood, the fan is not shown as describe in column 2, lines 63-64.

Re claims 8 and 11, as best understood, it appears that insulation sleeve 80 of different material than the inherent segment insulation and that the insulation material is thicker, respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al. in view of Hake et al., US 5917155. Schmidt et al. disclose the invention substantially as claimed as set forth in the rejection of claim 1 supra. Schmidt et al. do not expressly disclose the specific material used to form the insulation. Hake et al. disclose polyester-imide forming an inner insulation and polyamide-imide forming an outer insulation as set forth in claims 10 and 15, for the purpose of forming "a multilayer insulation system which is highly resistant to corona discharge," see column 1, lines 51-53. At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to insulate the stator sectors (both regular and irregular) of Schmidt et al. with polyester-imide forming an inner insulation and polyamide-imide forming an outer insulation as taught by Hake et al. One of ordinary skill in the art would have been motivated to do this make the motor sector windings resistant to corona discharge.

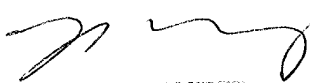
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. George and McGregor et al. '474 teach conductor insulation using both polyester and polyamide-imide. McGregor et al. '890 teach that the time to motor failure is a function of insulation thickness. Kusase et al. and Tamaki et al. teach additional end coil insulation. Shukushima et al. Teach a multiple heat-shrinkable tube containing polymide resin.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David W. Scheuermann whose telephone number is (703) 308-9637. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


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